On the genus *Rhodella*, the emended orders Dixoniellales and Rhodellales with a new order Glaucosphaerales (Rhodophyceae, Rhodophyta) (26: 277-288)

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The order Glaucosphaerales proposed by E. C. Yang, J. L. Scott, S. Y. Yoon and J. A. West required a Latin diagnosis as it was published in 2011, prior to the new rules adopted by the International Congress at Melbourne in August 2011. From January 1, 2012, taxa are validly published when a Latin or an English description or diagnosis is provided (Knapp et al. 2011). Thus, the English description below is intended to validate the name Glaucosphaerales. Typification of the order is also a requirement of the Code.

**Glaucosphaerales new order E. C. Yang, J. L. Scott, S. Y. Yoon & J. A. West**

Unicellular freshwater red alga with a single peripheral blue-green chloroplast composed of multiple small interconnected lobes with a peripheral thylakoid, plastoglobuli clusters, and no pyrenoid. Active perinuclear Golgi bodies continuously produce and rapidly eject small vesicles from the cell. Cells larger than most unicellular reds (to 25 µm diameter). Binary cell division is the only known reproduction. Low molecular weight carbohydrates are unknown.

**Type family.** *Glaucosphaeraceae* Skuja 1954, p. 56, designated here.

**Additional comments.** The original figure (p. 220, Fig. 1a & b) in Korshikov (1930) is here designated *lectotype* for the species. Korshikov observed “The cell is blue-green in colour, and with high-power objectives one can see that this depends on the presence of a great many small and almost isodiametric chromatophores, disposed close to one another on the periphery of the protoplast.” The light and electron microscope studies of Broadwater et al. (1995) were based on a culture isolate from Indiana, USA, collected and identified by Richard Starr, but show that a single blue-green chloroplast is present comprised of numerous small interconnected lobes around the cell periphery, which presumably accounts for the observations of Korshikov in which the peripheral lobes could be seen as discrete chloroplasts. Dr. Alexander Arkadiievich Korshikov (1889-1945; O. A. Korschikov [sic] in Ukrainian publications) died at the Buchenwald German concentration camp in 1945 (Matvienko and Dogadina 1996) and, according to Dr. Petro M. Tsarenko (Curator of Algae at the National Academy of Sciences of Ukraine, pers. comm.), none of Korshikov’s algal specimens are currently to be found at the M. G. Khodolny Institute of Botany.

It is possible that the original specimens of *Glaucosphaera vacuolata* from the Ukraine and those from Indiana ascribed to this taxon by Richard Starr are different organisms but a Ukrainian specimen needs to be re-isolated and compared with the USA isolate prior to any decision.

Many thanks to Michael Guiry for his comments.

**REFERENCES**


Korshikov, A. A. 1930. *Glaucosphaera vacuolata*, a new mem-

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